

AMENDMENTS TO THE CLAIMS

1 - 18. (Cancelled)

19. (Currently Amended) A composition which comprises: a pharmacologically effective amount of at least one orally ingestable or mucosally absorbable low purity glycosaminoglycan hyaluronic acid or salt thereof, ~~wherein said low purity glycosaminoglycan~~ ~~comprises comprising~~ at least one fraction having a molecular weight in the range of greater than 1,000,000 daltons, as measured using a protein standard/intrinsic viscosity, with the proviso that said composition does not contain an essential oil as an active ingredient, and wherein the low purity glycosaminoglycan hyaluronic acid or salt thereof contains up to 5% by weight protein contaminants, wherein said low purity glycosaminoglycan hyaluronic acid or salt thereof is defined as causing reactions when injected into owl monkey eyes but will not cause reactions when applied to the skin of mammals or when delivered orally or mucosally to mammals, and

[[a]] an oral or mucosal carrier selected from the group consisting of a liquid, an emulsion, a suspension, a cream, an ointment, a gel, a foam, a solid, a powder, water, a solution, a spray, a throat spray, a drink, a drink mix, a food, a candy, a mouthwash, a toothpaste, a gargle, a vaporizer liquid, a gum, a lozenge, an ingestable gel, an ingestable foam, an ingestable capsule, a tablet, an ingestable tablet, an ingestable dissolvable tablet, a suppository, and an ingestable nutritional supplement, with the proviso that when chondroitin sulfate is used as the sole glycosaminoglycan, the carrier is not a capsule or an ingestable tablet.

20 - 23. (Cancelled)

24. (Previously Presented) A method of treatment of inflammation, pain or itching which comprises orally or mucosally administering to a mammal the composition of claim 19.

25. (Previously Presented) The method of claim 24, wherein said application is made orally.

26. (Currently Amended) The method of claim 24, wherein said oral or mucosal carrier application form is selected from the group consisting of a liquid, an emulsion, a suspension, a cream, an ointment, a gel, a foam, a solid, a powder and a gum.

27. (Currently Amended) The method of claim 24, wherein said inflammation, pain or itching results from arthritis, bursitis, athletic injuries, tendonitis, trauma, gastritis, colitis, esophagitis, bronchitis, sore throat, tonsilitis, tendonitis, fibromyalgia, TMJ, dental pain, bruising, poor circulation, muscle cramps, tired feet, allergies, poison ivy, insect bites/stings, asthma, anaphylaxis, surgery, childbirth, sunburn, burns, edema related to diabetes, decubitus ulcers, superficial cuts and scrapes, open wounds, dry skin, psoriasis, Attention Deficit Hyperactivity Disorder (ADHD), ~~plaque formation associated with heart disease and stroke, increased degradation of spinal nerves post spinal cord injury, adhesion formation post surgery, scar formation post surgery, wound healing, ganglion formation, Alzheimer's disease, HIV, and wrinkles, and hair loss.~~

28 - 31. (Cancelled)

32. (Currently Amended) A method for preventing or treating inflammation, pain, or allergy-related diseases and conditions which comprises orally or mucosally administering to a mammal a therapeutically effective amount of the composition of claim 19.

33. (Currently Amended) A method for preventing or treating inflammation, pain, or allergy-related diseases and conditions which comprises orally administering to a mammal a therapeutically effective amount of the composition of claim 19.

34. (Currently Amended) A method for preventing or treating inflammation, pain, or allergy-related diseases and conditions which comprises mucosally administering to a mammal a therapeutically effective amount of the composition of claim 19.

35. (Currently Amended) Previously Presented) The method of Claims 33 or 34 wherein the inflammation, pain, or allergy-related diseases and conditions are selected from the group consisting of arthritis, bursitis, athletic injuries, tendonitis, trauma, anaphylaxis, surgery, childbirth, gastritis, colitis, esophagitis, bronchitis, sore throat, tonsilitis, tendonitis, fibromyalgia, TMJ, dental pain, bruising, poor circulation, muscle cramps, tired feet, allergies, poison ivy, insect bites/stings, asthma, sunburn, burns, edema related to diabetes, decubitus ulcers, superficial cuts and scrapes, open wounds, dry skin, psoriasis, Attention Deficit Hyperactivity Disorder (ADHD), ~~plaque formation associated with heart disease and stroke, increased degradation of spinal nerves post spinal cord injury, adhesion formation post surgery,~~

scar formation post surgery, wound healing, ganglion formation, Alzheimer's disease, HIV, and wrinkles, and hair loss.

36. (Currently Amended) The composition according to claim 19, wherein said at least one glycosaminoglycan hyaluronic acid or salt thereof further comprises a fraction having a molecular weight in the range of from 1,000 to less than 50,000 daltons.

37. (Currently Amended) The composition according to claim 19, wherein said at least one glycosaminoglycan hyaluronic acid or salt thereof further comprises a fraction having a molecular weight in the range of from 100,000 to 300,000 daltons.

38 - 40. (Cancelled)

41. (Previously Presented) The composition according to claim 19, wherein the carrier is selected from the group consisting of a liquid, an emulsion, a suspension, a solution, a cream, a gel, a foam, a solid, a powder, a spray, a gum and an ointment.

42. (Currently Amended) The composition according to claim [[23]] 19, wherein the carrier is selected from the group consisting of a liquid, a gel, a solution, a suspension, an emulsion, an ointment, a cream, a solid, a powder, a gum and a spray.

43 - 45. (Cancelled)

46. (Currently Amended) The ~~composition~~ method of claim [[19]] 24, wherein said composition is ~~a pain-relieving composition administered to treat pain.~~

47. (Currently Amended) The ~~composition~~ method of claim [[19]] 24, wherein said composition is an orally delivered pain-relieving composition.

48. (Currently Amended) The ~~composition~~ of claim [[19]] 24, wherein said composition is a mucosally delivered pain-relieving composition.

49. (Cancelled)

50. (Cancelled)

51. (Currently Amended) The composition of claim 19 ~~claims 19 or 23~~, wherein the glycosaminoglycan composition contains ~~less than a maximum of~~ 98% by weight hyaluronic acid.

52. (Previously Presented) A method of treatment of inflammation, pain or allergy-related diseases and conditions which comprises mucosally applying to a mammal the composition of claim 19.

53-58. (Cancelled)

59. (Currently Amended) The composition of claim 19, ~~22 or 23~~, wherein said at least one low purity glycosaminoglycan hyaluronic acid or salt thereof is of cosmetic or food grade and further comprises a fraction having a molecular weight in the range of from 1,000 to less than 50,000 or from 100,000 to 500,000.

60 – 65. (Cancelled)

66. (Currently Amended) The compositions according to ~~claims 41 or 42~~ 19, wherein the vaporizer liquid is a throat spray, the gum is a chewing gum or a dissolvable gum, the lozenge is throat lozenges, and the food is treats or candy.

67 - 69. (Cancelled)

70. (Currently Amended) An orally ingestible ingested or mucosally absorbed absorbable pharmaceutical composition selected from the group consisting of a drink, a drink mix, food, candy, mouthwash, toothpaste, gargle, vaporizer, gum, lozenge, ingestable gel, ingestable foam, ingestable capsule, tablet, ingestable tablet, ingestable dissolvable tablet, suppository, and ingestable nutritional supplement, which comprises a pharmacologically effective amount of at least one low purity glycosaminoglycan hyaluronic acid or salt thereof wherein said at least one low purity glycosaminoglycan hyaluronic acid or salt thereof comprises at least one fraction having a molecular weight range greater than 1,000,000 daltons as measured

using a protein standard/intrinsic viscosity, ~~with the proviso that~~ said composition does not contain an essential oil as an active ingredient, ~~with the proviso that when chondroitin sulfate is used as the sole low purity glycosaminoglycan, the carrier is not a capsule or an ingestable tablet~~ and wherein said low purity glycosaminoglycan hyaluronic acid or salt thereof is defined as causing reactions when injected into owl monkey eyes but will not cause reactions when applied to the skin of mammals or when delivered orally or mucosally to mammals.

71. (Cancelled)

72. (Currently Amended) The composition of claim ~~19, 22, 23 or~~ 70 wherein said low purity glycosaminoglycan hyaluronic acid or salt thereof contains up to about 5% impurities, ~~wherein said up to 5% impurities are from at least one impurity selected from the group consisting of proteins, nucleic acids, teichoic acids, endotoxins and lipids.~~

73. (Currently Amended) An orally ingested or mucosally-absorbed pharmaceutical composition selected from the group consisting of drink, drink mix, food, candy, mouthwash, toothpaste, gargle, vaporizer, gum, lozenge, ingestable gel, ingestable foam, ingestable capsule, tablet, ingestable tablet, ingestable dissolvable tablet, suppository, and ingestable nutritional supplement, which comprises:

an effective amount of at least one low purity glycosaminoglycan hyaluronic acid or salt thereof for treating inflammation, wherein said at least one low purity glycosaminoglycan hyaluronic acid or salt thereof comprises at least one fraction having a molecular weight range

greater than 1,000,000 daltons as measured using a protein standard/intrinsic viscosity, wherein said low purity glycosaminoglycan hyaluronic acid or salt thereof is defined as causing an inflammatory response when injected into owl monkey eyes but will not cause an adverse reaction when applied to the skin of mammals or when delivered orally or mucosally to mammals, and wherein the low purity glycosaminoglycan hyaluronic acid or salt thereof contains up to 5% by weight protein contaminants, with the proviso that said composition does not contain an essential oil as the active ingredient[[],]]

~~wherein said orally ingested or mucosally absorbed pharmaceutical composition is selected from the group consisting of drink, drink mix, food, candy, mouthwash, toothpaste, gargle, vaporizer, gum, lozenge, ingestable gel, ingestable foam, ingestable capsule, tablet, ingestable tablet, ingestable dissolvable tablet, suppository, and ingestable nutritional supplement, with the proviso that when chondroitin sulfate is used as the sole glycosaminoglycan, the carrier is not a capsule or an ingestable tablet.~~

74. (Previously Presented) Drink comprising the composition of claim 73.

75. (Previously Presented) Drink mix comprising the composition of claim 73.

76. (Previously Presented) Food comprising the composition of claim 73.

77. (Previously Presented) Candy comprising the composition of claim 73.

78. (Previously Presented) Mouthwash comprising the composition of claim 73.
79. (Previously Presented) Toothpaste comprising the composition of claim 73.
80. (Previously Presented) Gargle comprising the composition of claim 73.
81. (Previously Presented) Vaporizer comprising the composition of claim 73.
82. (Previously Presented) Gum comprising the composition of claim 73.
83. (Previously Presented) Lozenge comprising the composition of claim 73.
84. (Previously Presented) Ingestable gel comprising the composition of claim 73.
85. (Previously Presented) Ingestable foam comprising the composition of claim 73.
86. (Previously Presented) Ingestable capsule comprising the composition of claim 73.
87. (Previously Presented) Tablet comprising the composition of claim 73.
88. (Previously Presented) Ingestable tablet comprising the composition of claim 73.

89. (Previously Presented) Ingestable dissolvable tablet comprising the composition of claim 73.

90. (Previously Presented) Suppository comprising the composition of claim 73.

91. (Previously Presented) Ingestable nutritional supplement comprising the composition of claim 73.

92. (Cancelled)

93. (Currently Amended) The composition of claim [[92]] 19, wherein the glycosaminoglycan hyaluronic acid or salt thereof is in a total concentration of between 0.5% and 3.0% wt/vol.

94-96. (Cancelled)

97. (Currently Amended) A method for relieving joint pain or other discomforts associated with osteoarthritis, rheumatoid arthritis or joint disorders in a mammal comprising the step of delivering to said mammal by oral ingestion the composition of claim 19, wherein the carrier comprises [[of]] a nutritional supplement comprising an effective amount of low purity hyaluronic acid, or a salt or digest thereof, and a food or drink carrier, wherein the effective amount of low purity hyaluronic acid, or a salt or digest thereof, is administered in repeat low

doses of between 0.0001 mg and 100 mg and wherein said low purity hyaluronic acid is defined as causing reactions when injected into owl monkey eyes but will not cause reactions when applied to the skin of mammals or when delivered orally or mucosally to mammals.

98. (Currently Amended) The method of claim 97, ~~further comprising the step of adding the hyaluronic acid, or a salt or digest thereof, to the carrier, and wherein the carrier further comprises food or water.~~

99. (Previously Presented) The method of claim 97, wherein the nutritional supplement is provided in capsule form.

100. (Withdrawn) The method of claim 97, wherein the mammal is a human, an equine, a canine, or feline species.

101. (Currently Amended) A method for reducing discomfort of fibromyalgia in a person afflicted with fibromyalgia comprising the step of delivering to said person by oral ingestion the composition of claim 19, wherein the carrier comprises a nutritional supplement comprising ~~an effective amount of low purity hyaluronic acid, or a salt or digest thereof, and a nutritionally acceptable carrier, wherein the effective amount of low purity hyaluronic acid, or a salt or digest thereof, is administered~~ in repeated low doses of between 0.0001 mg and 100 mg, ~~wherein said low purity hyaluronic acid is defined as causing reactions when injected into owl~~

monkey eyes but will not cause reactions when applied to the skin of mammals or when delivered orally or mucosally to mammals.

102. (Currently Amended) The method of claim 101, ~~further comprising the step of adding the hyaluronic acid, or a salt or digest thereof, to the carrier, and wherein the carrier~~ further comprises food or water.

103. (Previously Presented) The method of claim 101, wherein the nutritional supplement is provided in capsule form.

104. (Currently Amended) A method for relieving joint pain or other discomforts associated with joint disorders in a mammal comprising the step of delivering to said mammal by oral ingestion the composition of claim 19, wherein the carrier comprises a nutritional supplement, ~~comprising an effective amount of low purity hyaluronic acid, or a salt or digest thereof, and a food or drink, carrier,~~ wherein the effective amount of low purity hyaluronic acid, or a salt thereof in the composition ~~or digest thereof~~, is administered in repeated low doses of between 0.0001 mg 100 mg, ~~wherein said low purity hyaluronic acid is defined as causing reactions when injected into owl monkey eyes but will not cause reactions when applied to the skin of mammals or when delivered orally or mucosally to mammals.~~

105. (Currently Amended) The method of claim [[102]] 101, wherein the nutritional supplement is provided in tablet form.

106. (Currently Amended) The method of claim 104, ~~further comprising the step of adding the hyaluronic acid, or a salt or digest thereof, to the carrier, and wherein the carrier~~ further comprises food or water.

107. (Currently Amended) The method of claim 104, wherein the composition nutritional supplement is provided in capsule form.

108. (Previously Presented) The method of claim 104, wherein the mammal is a human, an equine, a canine, or a feline species.

109. (Previously Presented) The method of claim 104, wherein the joint pain is the result of an arthritic condition.

110. (Currently Amended) The method of claim [[104]] 109, wherein the arthritic condition is selected from the group consisting of osteoarthritis and rheumatoid arthritis.

111. (Previously Presented) The method of claim 104, wherein the joint pain is the result of an inflammatory condition.

112. (Currently Amended) A nutritional supplement comprising an nutritionally effective amount of at least one orally ingestable or mucosally absorbable low purity hyaluronic acid or salt thereof, comprising at least one fraction having a molecular weight in the range of

greater than 1,000,000 daltons, as measured using a protein standard/intrinsic viscosity, with the proviso that said composition does not contain an essential oil as an active ingredient, and wherein the low purity hyaluronic acid or salt thereof contains up to 5% by weight protein contaminants, or a salt or digest thereof, and a food or drink carrier, the nutritional supplement provided in an orally ingestible dosage form, wherein said low purity hyaluronic acid or a salt or a digest thereof comprises at least one fraction having a molecular weight in the range of greater than 1,000,000 daltons as measured using a protein standard/intrinsic viscosity, wherein the hyaulronic acid or a salt thereof is present in an amount of between 0.01% and 5.0 wt/vol., wherein said low purity hyaluronic acid is defined as causing reactions when injected into owl monkey eyes but will not cause reactions when applied to the skin of mammals or when delivered orally or mucosally to mammals.

113. (Currently Amended) The nutritional supplement of claim 112, wherein the effective amount of hyaluronic acid is present in a dose of administered in repeated low doses of between 0.0001 mg and 100 mg.

114. (Currently Amended) The nutritional supplement of claim 112, wherein the orally ingestible dosage form is a capsule or gel [[seal]] cap.

115. (Currently Amended) Food or treat for horse or dog comprising the composition of claim 19, wherein the active ingredient is present in a dose between 0.001 mg and 100 mg.

116. (Currently Amended) The method of claim 24, wherein said glycosaminoglycans are administered in multiple low doses of between 0.0001 mg and 100 mg.

117-123. (Cancelled)

124. (Currently Amended) The composition of claim 19, wherein the adverse reaction is selected from the group at least one of the groups consisting of irritation, blistering and rash, and combinations thereof.

125-130. (Cancelled)

131. (Currently Amended) The composition of claim 19, wherein the glycosaminoglycan hyaluronic acid or salt thereof is present in a total concentration of between 0.01% and 3.0% wt/vol of the composition.

132. (Cancelled)

133. (Currently Amended) The composition of claim 19 claims 19, 22 or 23 wherein the low purity glycosaminoglycan hyaluronic acid or salt thereof is present in an amount of between 0.01% and 5.0% wt/vol.